FEI | Faith Engineering, Inc.

541 Quantum Road NE
Rio Rancho, New Mexico 87124
(505) 243-5494 • FAX (505) 243-5585
e-mail • faithinc@flash.net

August 24, 2001

Mr. Nolan Bennett
Environmental Health Scientist
Bernalillo County Environmental Health Department
600 Second St. NW, Suite 500
Albuquerque, NM 87102

Sent via E-Mail: nbennett@bernco.gov and US Mail

RE: Transmittal of 2nd Quarterly Ground Water Sampling Results
430 Isleta SW, The Old Horn Site; NMED/USTB Facility ID No. 301002/28600
Contract Control No. 980473

Dear Nolan:

Please find included herewith the report for the second quarter of ground water sampling and analysis for the subject site. Ground water sampling was conducted on May 30, 2001.

This sampling event provides the sample results with field testing for an abbreviated round of 10 of the 19 ground water monitoring wells on site. During this quarter's sampling event, benzene concentrations above the NMWQCC standard of 10 μg/l were found in 3 monitoring wells; MW-3A, VM-1 and VM-2. Ethylbenzene concentrations above the standard of 750 μg/l were found in 2 monitoring wells; VM-1 and VM-2. Total xylenes concentrations above the standard of 620 μg/l were found in 1 monitoring well; VM-1. Total naphthalene concentrations (including naphthalene, 1-methylnaphthalene and 2-methylnaphthalene) above the standard of 30 μg/l were found in 3 monitoring wells; MW-3A, VM-1 and VM-2.

FEI has prepared a work plan for a Tier 2 evaluation to address the need for further remedial action at the site. Please do not hesitate to contact the undersigned if you have any questions or comments regarding this Sampling Report.

Respectfully submitted,

FAITH ENGINEERING, INC.

Stuart E. Faith, PE – President

cc. w/ encls. Mr. Tom Leck – NMED/USTB
Mr. Bill Brown - TPA

FEI FILE NUMBER 00-01-1184-05

SECOND QUARTERLY SAMPLING REPORT
THE OLD HORN SITE
430 ISLETA BLVD. SW
ALBUQUERQUE, NEW MEXICO
FACILITY #301002/28600

PREPARED BY:

STUART FAITH, P.E.
FAITH ENGINEERING, INC.
541 QUANTUM RD. NE
RIO RANCHO, NEW MEXICO 87124
(505) 243-5494 • FAX (505) 243-5585

AUGUST 24, 2001

PREPARED FOR:

THE BERNALILLO COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
AND
THE NEW MEXICO ENVIRONMENT DEPARTMENT
UNDERGROUND STORAGE TANK BUREAU

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FORM 1216
QUARTERLY MONITORING REPORT

Please include the following information:

1. **Site name:** Old Horn
2. **Responsible party:** Mr. Nolan Bennett
3. **Responsible party mailing address** (list contact person if different):

   Bernalillo County Environmental Health Dept.

   600 2nd Street NW, Suite 500

   Albuquerque, NM 87102
4. **Facility number:** 301002/28600
5. **Address/legal description:** 430 Isleta Blvd. SW

   Albuquerque, NM
6. **Author/consulting company:** Faith Engineering, Inc.
7. **Date of report:** 08/24/2001
8. **Date of confirmation of release or date USTB was notified of the release:**

   1991

STATEMENT OF FAMILIARITY

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.

Signature:_____

Name: Stuart Faith

Affiliation: Faith Engineering, Inc.

Title: President

Certified Scientist #: 080

Date:_____

I. INTRODUCTION:

I. A. Scope of Work

Faith Engineering, Inc. (FEI), in collaboration with Tecumseh Professional Associates, Inc. (TPA), has been retained by the Bernalillo County Environmental Health Department to provide professional environmental services at the Old Horn site, 430 Isleta SW, Albuquerque, New Mexico (the Site). The location of the Site is shown on Figure 1. This report documents the second quarter of ground water sampling conducted at the site on May 31, 2001. The period covered in this report is from December 2000 to June 2001.

I. B. This quarter's highlights

This sampling event represents the second quarter of ground water quality re-examination as outlined in the work plan approval letter dated December 8, 1999, as amended on March 17, 2000, November 14, 2000 and again on February 20, 2001. The sampling event provides laboratory sample results with field testing for an abbreviated round of 10 of the 19 ground water monitoring wells on site. A Hydrogeologic Investigation (See "Old Horn Site Hydrogeologic Investigation" dated May 16, 2001) was also performed and reported during this quarter to better characterize the current subsurface hydrogeologic regime and the vertical and horizontal extent of soil and groundwater impacts at the Site following remedial efforts. Also completed during this quarter was the field activities necessary to locate MW-4A and replace the monitoring well's surface completion.

II. ACTIVITIES PERFORMED DURING THIS QUARTER:

II. A. Brief description of the remediation system and date installed

In early 1992, the NMED placed the Old Horn Site on its list of state-lead Groundwater Protection Act (GWPA) sites. Monteverde Environmental Consultants, Inc. (Monteverde) was retained by the NMED to complete investigation activities and design and install a remediation system. Between 1992 and 1994, Monteverde installed and sampled additional monitor wells and soil borings in the Site vicinity. During this same period, Monteverde reportedly excavated approximately 150 $yards^3$ of soil from the former tank excavation area and installed a passive venting/active sparging in-situ reclamation system in the southernmost portion of the Site. This system was apparently never operated.

Intera, Inc. (Intera) was retained by NMED to replace Monteverde in late 1994. Intera conducted a more detailed site investigation installing additional wells and soil borings, which provided a more comprehensive understanding of the Site. Their investigations focused on the southern half of the Old Horn Site. Intera conducted a short-term SVVS™ pilot test at the Site in November 1994. Based on the results of the pilot test, Intera installed 14 SVVS™ well nests and associated subgrade piping in the

southern portion of the Old Horn Site in 1995. As with the Monteverde reclamation system, these wells were never operated.

Following installation of the SVVS™ system, it was reported that two groundwater sampling events were conducted at the Site; one in 1996 and one in 1998. These data document reductions in dissolved phase BTEX and light non-aqueous phase liquids (LNAPLs) in select wells.

II. B. Description of activities performed to keep system operating properly

None. System never operated.

II. C. Monitoring activities performed

FEI personnel took an extra course of action to locate MW-4A and replaced the monitoring well's surface completion on April 13, 2001 prior to this quarter's sampling event. Ground water monitoring and sampling at the Site during this quarter took place on May 31, 2001. This quarter's sampling included the following:

- ground water elevation measurements in all wells.
- quarterly event ground water sampling of monitor wells MW-3A, MW-4A, MW-6, FTW-2, FTW-3, FTW-4, FTW-6, FTW-9, VM-1, and VM-2.
- laboratory analysis of ground water samples for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), Methyl-t-Butyl Ether (MTBE), TMB, Ethylene Dibromide (EDB), Ethylene Dichloride (EDC), Naphthalene, 1-Methynaphthalene and 2-Methylnaphthalene by EPA Method 8260 (expanded napthalenes).
- field testing for natural attenuation indicators of ground water samples, including iron, phosphate, sulfide, nitrate, alkalinity, pH, dissolved oxygen, conductivity, and temperature.

The locations of all ground water monitoring wells are shown on Figure 1. Monitoring and sampling procedures are described in Appendix 1. Table 4 provides a historical summary of field activities at the site and Appendix 2 contains this quarter's original Field Activity Logs. The laboratory results of the ground water analyses for the current monitoring period are shown on Table 1. Historic ground water sampling results are shown on Table 2. FEI is responsible for QA / QC related to sample collection, field data collection and documentation, reviewing validity of data and the reporting of data. A review of the recent Hydrogeologic Investigation and this quarter's field activities has revealed an error in reporting the sample results for monitoring well FTW-4. This data was inadvertently identified in the field during collection as

monitoring well FTW-8. Corrections reflected in Tables 1 and 2 correspond directly with the Laboratory reports and the Chain of Custody Form that are provided in Appendix 3.

This sampling event provides the sample results with field testing for an abbreviated round of 10 of the 19 ground water monitoring wells on site. During this quarter's sampling event, benzene concentrations above the NMWQCC standard of 10 µg/l were found in 3 monitoring wells; MW-3A (420 µg/l), VM-1 (850 µg/l) and VM-2 (170 µg/l). Ethylbenzene concentrations above the standard of 750 µg/l were found in 2 monitoring wells; VM-1 (1800 µg/l) and VM-2 (810 µg/l). Total xylenes concentrations above the standard of 620 µg/l were found in 1 monitoring well; VM-1 (805 µg/l). Total naphthalene concentrations (includes naphthalene, 1-methylnaphthalene and 2-methylnaphthalene) above the standard of 30 µg/l were found in 3 monitoring wells; MW-3A (120 µg/l), VM-1 (450 µg/l) and VM-2 (489 µg/l). A total BTEX summary and contour map for the second quarter ground water analysis are shown on Figure 1. In an effort to more realistically characterize the analytical data generated from the quarterly sampling, FEI has adopted a reporting standard of multi-component compounds like total Xylenes (see Appendix 1).

Depth to ground water during this quarter's sampling event varied from 9.97 feet below ground surface (bgs) in well MW-5 to 13.85 feet bgs in well MW-3A. All ground water elevation data including the historical data is summarized in Table 3. This quarter's measurements of on-site ground water elevations indicate a defined directional flow in a southern orientation. A water elevation summary and directional flow map for the second quarter ground water measurements are shown on Figure 2.

II. D. System performance and effectiveness

Not Applicable, See II. A. and B.

II. E. Statement verifying containment of release

Based on ground water sample results from site perimeter monitor wells and the recently completed Hydrogeologic Investigation, containment of off-site ground water contaminants cannot be assured at the Old Horn Site under present conditions. Dissolved phase hydrocarbons in the ground water are within the highway easement to the west of the site. Please refer to Figure 1. There is no evidence to suggest other off-site, up-gradient sources of contaminant for the BTEX concentration levels in VM-1 and VM-2.

III. SUMMARY AND CONCLUSIONS:

III. A. Discussion of trends or changes noted in analytical results or site conditions

Laboratory results obtained during this second quarter sampling event and the Hydrogeologic Investigation indicate that BTEX concentrations in the ground water are within the highway easement to

the west and remain above the NMWQCC standards. Total Naphthalene concentrations are also above the NMWQCC standard of 30 µg/l in monitoring well VM-2 adjacent to the highway easement.

These results also indicate that the contaminant plume may be characterized as an older and weathered petroleum release.

III. B. Ongoing assessment of the remediation system

Not Applicable, See II. A. and B.

III. C. Recommendations

FEI recommends continuing site monitoring and sampling pursuant to the work plan approval letter dated December 8, 1999, as amended to change the report submission dates. A new work plan has been submitted for a Tier 2 evaluation to address the need for further remedial action at the site. The next quarterly sampling report will be submitted on or about October 15, 2001.

LEGEND

- Existing Monitor Well Location
- New 4" Diameter VE/Monitor Well
- New 2" Diameter Monitor Well
- New Pilot Test Well

- Building
- Concrete
- Asphalt
- Vegetation
- Fence Line
- Utility Pole
- Manhole
- Groundwater Flow Sensor

BTEX Concentration Levels and Plume

- 1-10 ppb
- 10-100 ppb
- 100-1000 ppb
- >1000 ppb

N

Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

0 45 ft
Scale

Low cable fence
Drive Thru
Not Mapped
Steel Fence
Dairy Queen
Block Fence
Asphalt Parking Lot
Carport
Parking
House
Villa Lobo Grocery (Meat Packing Building)
FTW-5
WALDIE ROAD
Barbed Wire Fence
Vacant Lot
FTW-4
FTW-7
FTW-6
Driveway (dirt)
Grass
FTW-9
MW-9
Los Compadres Restaurant
Atrisco Lateral (unlined)
Gravel Lot
MW-4A
Building
Former Building
Property Boundary
Sign
VM-2
FTW-2
FTW-8
MW-1B
FTW-1
VM-1
AS-1
FTW-3
MW-5
MW-10
MW-11
MW-3A
MW-6
Native Dirt and Grass
Above Ground Storage Tank
Small Ditch
Mobile Homes
Mobile Home
"The Ranch" Mobile Home Park

Benzene	170
Toluene	10
Ethylbenzene	810
Total Xylenes	86
MTBE	<10

Benzene	3.2
Toluene	<1.0
Ethylbenzene	8.5
Total Xylenes	28
MTBE	<1.0

Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

Benzene	2.1
Toluene	<1.0
Ethylbenzene	4.3
Total Xylenes	2.6
MTBE	<1.0

Benzene	850
Toluene	29
Ethylbenzene	1800
Total Xylenes	805
MTBE	<25

Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

Benzene	420
Toluene	<50
Ethylbenzene	<50
Total Xylenes	<100
MTBE	<50

Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

Benzene	1.2
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

Benzene	<1.0
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<2.0
MTBE	<1.0

Old Horn Site
430 Isleta Blvd. SW
Albuquerque, New Mexico

FEI Faith Engineering, Inc.
541 Quantum Road NE
Rio Rancho, New Mexico 87124-4502
(505) 243-5494 • FAX (505) 243-5585
e-mail • faithinc@flash.net

TECUMSEH
Professional Associates, Inc.
5600 Wyoming Blvd. NE, Suite 150
Albuquerque, New Mexico 87109
ph: (505) 293-1156 fax: (505) 293-1971

Subject: Site Map and BTEX Concentration Levels		
Drawn by: KGF/WJB	Client: BCEHD	
Date : August 2001	Figure: 1	Project: 99-01-1187

LEGEND

- Existing Monitor Well Location
- New 4" Diameter VE/Monitor Well
- New 2" Diameter Monitor Well
- New Pilot Test Well

- Building
- Concrete
- Asphalt
- Vegetation
- Fence Line
- Utility Pole
- Manhole
- Groundwater Flow Sensor

- Ground Water Contour 0.10 ft Intervals
- 4924.74 Ground Water Elevations

0 45 ft
Scale

Low cable fence
Drive Thru
Not Mapped
Steel Fence
Dairy Queen
MW-9
Atrisco Lateral (unlined)
Los Compadres Restaurant
Block Fence
Asphalt Parking Lot
4934.47
MW-4A
Gravel Lot
Carport
4934.44
FTW-5
Parking
Villa Lobo Grocery (Meat Packing Building)
4934.50
Building
House
WALDIE ROAD
VM-2
4934.39
FTW-2
4934.38
Former Building
Property Boundary
Sign
FTW-8
MW-1B
4934.37
4934.33
FTW-3
FTW-1
VM-1
AS-1
Barbed Wire Fence
4934.33
FTW-4
Vacant Lot
MW-5
4933.25
FTW-7
4934.27
4934.26
FTW-6
MW-10
MW-11
Driveway (dirt)
MW-3A
4934.23
Native Dirt and Grass
Grass
4934.26
MW-6
Above Ground Storage Tank
Mobile Homes
FTW-9
4934.21
Small Ditch
Mobile Home
"The Ranch" Mobile Home Park

Old Horn Site
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e-mail • faithinc@flash.net

TECUMSEH
Professional Associates, Inc.
5600 Wyoming Blvd. NE, Suite 150
Albuquerque, New Mexico 87109
ph: (505) 293-1156 fax: (505) 293-1971

Subject: Ground WaterContour Map		
Drawn by: KGF/WJB	Client: BCEHD	
Date : August 2001	Figure: 2	Project: 99-01-1187

TABLE 1
Old Horn • 430 Isleta
00-01-1184-05 • NMED FACILITY #28600
CURRENT GROUND WATER ANALYSIS RESULTS

		ORGANICS											INORGANICS						INDICATORS		
LOCATION	**DATE SAMPLED**	**BENZENE**	**TOLUENE**	**ETHYL BENZENE**	**TOTAL XYLENES**	**MTBE**	**EDB**	**EDC**	**TMB**	**NAPHTHALENE**	**1-METHYL NAPHTHALENE**	**2-METHYL NAPHTHALENE**	**IRON**	**PHOSPHATE**	**SULFIDE**	**ALKALINITY as CaCO.**	**DISS O2**	**NITRATE**	**pH**	**CONDUCTIVITY**	**TEMP**
UNITS		µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	ug/l	µg/l	µg/l			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		µmhos/cm	˚C
STANDARDS		**10**	**750**	**750**	**620**	**100**	**0.1**	**10**		**30**			TOTAL								
MW-3A	5/31/01	**420**	< 50	< 50	<100	< 50	< 50	< 50	<100	**120**	**< 250**	**< 250**	4.0	2.0	0	350	1.0	1.0	6.54	777	18.9
MW-4A	5/31/01	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 5.0	< 5.0	2.0	2.0	0	200	0.5	0.6	6.83	897	19.1
MW-6	5/31/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0	2.0	2.0	0	300	1.0	1.0	6.92	778	17.6
FTW-2	5/31/01	3.2	< 1.0	8.5	28	< 1.0	< 1.0	< 1.0	41	5.6	< 5.0	< 5.0	4.0	0.4	0	250	3.0	0.6	*	613	19.4
FTW-3	5/31/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0	1.5	2.0	1.0	250	1.0	0.8	6.98	779	17.5
FTW-4	5/31/01	2.1	< 1.0	4.3	2.6	< 1.0	< 1.0	< 1.0	< 2.0	1.6	< 5.0	< 5.0	0.4	0	0	200	3.0	4.0	*	985	20.6
FTW-6	5/31/01	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	2.4	8.2	< 5.0	1.0	2.0	0	250	1.0	0.6	7.11	925	19.7
FTW-9	5/31/01	1.2	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 5.0	< 5.0	1.5	1.0	0	200	3.0	0.8	6.87	546	19.0
VM-1	5/31/01	**850**	29	**1800**	**805**	< 25	< 25	< 25	155	**450**	**< 130**	**130**	10	0	0	350	4.0	0.6	*	408	24.5
VM-2	5/31/01	**170**	10	**810**	86	< 10	< 10	< 10	35	**350**	**61**	**78**	10	1.0	0	300	3.0	0.0	*	1032	25.5
TRIP BLANK	5/30/01	< 1.0	< 1.0	< 1.0	<2.0	<1.0	< 1.0	< 1.0	<2.0	< 1.0	<5.0	< 5.0	*	*	*	*	*	*	*	*	*

* - Not Tested

Data checked _____ / _____

Faith Engineering, Inc
8/27/01

TABLE 2
Old Horn • 430 Isleta
00-01-1184-05 • NMED FACILITY #28600
HISTORY OF GROUND WATER TESTING

		ORGANICS											INORGANICS							INDICATORS		
LOCATION	**DATE SAMPLED**	**BENZENE**	**TOLUENE**	**ETHYL BENZENE**	**TOTAL XYLENES**	**MTBE**	**EDB**	**EDC**	**TMB**	**NAPHTHALENE**	**1-METHYL NAPHTHALENE**	**2-METHYL NAPHTHALENE**	**IRON**		**PHOSPHATE**	**SULFIDE**	**ALKALINITY as CaCO.**	**DISS O2**	**NITRATE**	**pH**	**CONDUCTIVITY**	**TEMP**
UNITS		µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	ug/l	µg/l	µg/l			mg/l		mg/l	mg/l	mg/l	mg/l	mg/l		µmhos/cm	˚C
STANDARDS		**10**	**750**	**750**	**620**	**100**	**0.1**	**10**		**30**			SOLUBLE	TOTAL								
MW-1B	9/21/00	**20**	5.2	**1100**	**<1105**	<5.0	<5.0	<5.0	1270	**230**	*	*****	0.4	0.8	0.2	0	250	0.5	0.2	7.02	661	23.2
MW-3A	9/21/00	**490**	<20	28	<40	<20	<20	<20	<40	**130**	*	*	3.0	3.0	1.5	0	350	1.0	0.2	6.55	883	23.1
	5/31/01	**420**	< 50	< 50	<100	< 50	< 50	< 50	<100	**120**	**< 250**	**< 250**	*	4.0	2.0	0	350	1.0	1.0	6.54	777	18.9
MW-4A	9/21/00	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	*	*	2.0	4.0	1.0	0	175	1.0	0.2	6.68	900	22.5
	5/31/01	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 5.0	< 5.0	*	2.0	2.0	0	200	0.5	0.6	6.83	897	19.1
MW-5	9/21/00	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	1.5	5.0	2.0	0	200	2.0	0.2	6.87	738	21.7
MW-6	9/21/00	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	4.0	4.0	5.0	0	250	0.5	0.8	6.47	844	19.9
	5/31/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0	*	2.0	2.0	0	300	1.0	1.0	6.92	778	17.6
MW-10	9/21/00	**100**	<5.0	230	<125	<5.0	<5.0	<5.0	73.5	**62**	*	*	5.0	6.0	0.6	0.1	250	0.5	0.4	6.81	801	24.3
MW-11	9/21/00	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	1.0	1.5	4.0	0	175	0.5	0.1	6.76	766	22.1
FTW-1	3/23/01	**35**	<5.0	120	18	<5.0	<5.0	<5.0	<10	**50**	*	*	14	15	2.0	2.0	550	1.5	0.4	7.2	725	17.9
FTW-2	3/23/01	8.3	< 1.0	61	160	< 1.0	< 1.0	< 1.0	207	29	*	*	9.0	10	0	3.0	250	0.0	1.0	7.45	701	17.3
	5/31/01	3.2	< 1.0	8.5	28	< 1.0	< 1.0	< 1.0	41	5.6	< 5.0	< 5.0	*	4.0	0.4	0	250	3.0	0.6	*	613	19.4
FTW-3	3/23/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	2.0	3.0	0.3	1.5	300	1.0	1.5	7.59	807	16.3
	5/31/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.0	< 5.0	*	1.5	2.0	1.0	250	1.0	0.8	6.98	779	17.5
FTW-4	3/23/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	1.8	*	*	1.5	3.0	1.5	9.0	350	2.0	1.5	7.43	845	18.2
	5/31/01	2.1	< 1.0	4.3	2.6	< 1.0	< 1.0	< 1.0	< 2.0	1.6	< 5.0	< 5.0	*	0.4	0	0	200	3.0	4.0	*	985	20.6
FTW-5	3/23/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	1.0	3.0	0.8	0	200	1.5	0.6	7.3	833	17.8
FTW-6	3/23/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	2.9	*	*	6.0	7.0	1.5	0	350	2.0	1.0	7.81	1061	17.4
	5/31/01	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	2.4	8.2	< 5.0	*	1.0	2.0	0	250	1.0	0.6	7.11	925	19.7
FTW-7	3/23/01	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	*	*	2.0	3.0	1.0	5.0	250	2.0	0.8	7.65	683	16.3
FTW-9	3/23/01	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	*	*	3.0	3.0	0.4	1.0	550	1.0	1.5	7.61	683	18.4
	5/31/01	1.2	< 1.0	< 1.0	<2.0	< 1.0	< 1.0	< 1.0	<2.0	< 1.0	< 5.0	< 5.0	*	1.5	1.0	0	200	3.0	0.8	6.87	546	19.0

TABLE 2
Old Horn • 430 Isleta
00-01-1184-05 • NMED FACILITY #28600
HISTORY OF GROUND WATER TESTING

		ORGANICS											INORGANICS							INDICATORS		
LOCATION	**DATE SAMPLED**	**BENZENE**	**TOLUENE**	**ETHYL BENZENE**	**TOTAL XYLENES**	**MTBE**	**EDB**	**EDC**	**TMB**	**NAPHTHALENE**	**1-METHYL NAPHTHALENE**	**2-METHYL NAPHTHALENE**	**IRON**		**PHOSPHATE**	**SULFIDE**	**ALKALINITY as CaCO.**	**DISS O2**	**NITRATE**	**pH**	**CONDUCTIVITY**	**TEMP**
UNITS		µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	ug/l	µg/l	µg/l			mg/l		mg/l	mg/l	mg/l	mg/l	mg/l		µmhos/cm	˚C
STANDARDS		**10**	**750**	**750**	**620**	**100**	**0.1**	**10**		**30**			SOLUBLE	TOTAL								
VM-1	3/23/01	**970**	<100	**2300**	**930**	<100	<100	<100	180	**700**	*	*	18	20	0.0	10	400	1.0	0.1	6.81	410	16.8
	5/31/01	**850**	29	**1800**	**805**	< 25	< 25	< 25	155	**450**	**< 130**	**130**	*	10	0	0	350	4.0	0.6	*	408	24.5
VM-2	3/23/01	**140**	8.7	**1200**	81.1	<1.0	<1.0	<1.0	17.3	**390**	*	*	8.0	10	0.1	4.0	500	1.0	0.4	7.22	465	17.1
	5/31/01	**170**	10	**810**	86	< 10	< 10	< 10	35	**350**	**61**	**78**	*	10	1.0	0	300	3.0	0.0	*	1032	25.5
AS-1	3/23/01	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	*	*	1.5	1.5	0	4.0	150	1.0	0.2	7.61	570	18.9

^ - Refer to Appendix 1

* - Not Tested

Data checked _____ / _____

TABLE 3
Old Horn • 430 Isleta
00-01-1184-05 • NMED FACILITY #28600
SUMMARY OF GROUND WATER ELEVATION MEASUREMENTS

WELL NUMBER	ELEVATION (feet above datum)	DATE	STATIC (feet BG)	WATER LEVEL (feet AD)	(+) = RISING (-) = FALLING
MW-1B	4947.19	9/21/00	13.25	4933.94	
		3/23/01	12.66	4934.53	0.59
		5/31/01	12.82	4934.37	-0.16
MW-3A	4948.08	9/21/00	14.10	4933.98	
		3/23/01	13.68	4934.40	0.42
		5/31/01	13.85	4934.23	-0.17
MW-4A	4946.60	9/21/00	12.37	4934.23	
		3/23/01	†	†	
		5/31/01	12.13	4934.47	0.24
MW-5	4943.22	9/21/00	10.18	4933.04	
		3/23/01	9.75	4933.47	0.43
		5/31/01	9.97	4933.25	-0.22
MW-6	4946.70	9/21/00	12.73	4933.97	
		3/23/01	12.30	4934.40	0.43
		5/31/01	12.44	4934.26	-0.14
MW-10	4947.40	9/21/00	13.37	4934.03	
		3/23/01	12.94	4934.46	0.43
		5/31/01	13.13	4934.27	-0.19
MW-11	4947.33	9/21/00	13.34	4933.99	
		3/23/01	12.83	4934.50	0.51
		5/31/01	13.06	4934.27	-0.23

TABLE 3
Old Horn • 430 Isleta
00-01-1184-05 • NMED FACILITY #28600
SUMMARY OF GROUND WATER ELEVATION MEASUREMENTS

WELL NUMBER	ELEVATION (feet above datum)	DATE	STATIC (feet BG)	WATER LEVEL (feet AD)	(+) = RISING (-) = FALLING
FTW-1	4947.09	3/23/01	12.60	4934.49	
		5/31/01	12.78	4934.31	-0.18
FTW-2	4947.15	3/23/01	12.58	4934.57	
		5/31/01	12.77	4934.38	-0.19
FTW-3	4946.71	3/23/01	12.18	4934.53	
		5/31/01	12.38	4934.33	-0.20
FTW-4	4946.24	3/23/01	11.70	4934.54	
		5/31/01	11.91	4934.33	-0.21
FTW-5	4946.37	3/23/01	11.75	4934.62	
		5/31/01	11.93	4934.44	-0.18
FTW-6	4945.65	3/23/01	11.30	4934.35	
		5/31/01	11.39	4934.26	-0.09
FTW-7	4944.85	3/23/01	10.38	4934.47	
		5/31/01	10.58	4934.27	-0.20
FTW-9	4946.85	3/23/01	12.47	4934.38	
		5/31/01	12.64	4934.21	-0.17
VM-1	4947.31	3/23/01	12.83	4934.48	
		5/31/01	13.00	4934.31	-0.17
VM-2	4946.79	3/23/01	12.20	4934.59	
		5/31/01	12.40	4934.39	-0.20
AS-1	4947.46	3/23/01	12.98	4934.48	
		5/31/01	13.17	4934.29	-0.19

† - Well Casing covered in Asphalt

Data checked _____ / _____

Table 4
Old Horn 430 Isleta
00-01-1184-05 • NMED Facility # 301002
Summary of Tasks Performed in the Field

DATE	FIELD TECH.	DESCRIPTION
9/21/00	KGF, MB	Initial sampling round(1st Qtr)-all existing wells, site survey.
10/12/00-10/13/00	BB, TC	Drilling on site, soil samples taken
11/28/00	BB, TC	Drilling on site, soil samples taken
2/21/01	BB, TC	Drilling on site, soil samples taken
3/23/01	TC, MB	Hydrogeologic Investigation ground water sampling
4/13/01	KGF, MB	Find, uncover and fix monitoring well MW-4 for next sampling event
5/31/01	MB, KL	2nd Quarterly sampling

Data checked _____ / _____

APPENDIX 1

Sampling Protocol

Prior to any sampling, well development or purging, all monitor wells were sounded for depth to ground water. FEI used an electronic sounder with an accuracy of ±0.01/foot. Ground water elevations (from datum) were determined using survey data collected during the Hydrogeologic Investigation.

Prior to any sampling event, a minimum of three (3) well bore volumes were purged from each well using a Grundfos Sampling Pump. Samples were collected in HCl preserved VOAs and placed on ice in a container for delivery to Pinnacle Laboratories, in Albuquerque, New Mexico, for analyses. The ground water samples were analyzed for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), Naphthalene, Methyl-t-Butyl Ether (MTBE), TMB, Ethylene Dibromide (EDB) and Ethylene Dichloride (EDC) by EPA Method 8260 with an expanded Naphthalene range (PBMS). Natural attenuation indicator parameters Iron, Phosphate, Sulfide, Alkalinity, pH, dissolved oxygen, conductivity, temperature and nitrate were analyzed and measured in the field using the appropriate field test kits and equipment. All EPA-approved sampling protocols were observed and a chain of custody was maintained on all samples.

In an effort to more realistically characterize the analytical data generated from the quarterly sampling, FEI has adopted a reporting standard of multi-component compounds like total xylenes. Detection limit values in a multi-component compound that are reported as below detection limits and are less than 10 percent of the lowest detectable value will not be added-in as part of the total concentration value reported. Detection limit values greater than 10 percent of the lowest detectable value will be added-in as part of the total concentration value reported. This will eliminate confusion regarding the “less-than” symbols where concentrations have been detected.

APPENDIX 2

Field Notes

APPENDIX 3

Analytical Laboratory Reports